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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,936	08/09/2006	Masanori Tabata	4554-014	4514
23429 7590 01/04/2010 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER				
STELLING, LUCAS A				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
01/04/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,936

**Applicant(s)**

TABATA ET AL.

**Examiner**

Lucas Stelling

**Art Unit**

1797

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-20, 22-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) 14-18, 20, and 26-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 24 depends from claim 19, and therefore incorporates all limitations of claim 19. Claim 24 is rendered indefinite because claim 19 requires the pH of the water in the wastewater treatment bath falls within the range of 2 to 4, while claim 24 requires that the pH of the wastewater treatment bath falls within the range of 7-12. This limitation is not narrower in scope than claim 19, and it is inconsistent with the range specified in the parent claim 19.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,573,676 to Massholder et al. ("Massholder").
5. As to claim 19, Massholder teaches a wastewater treatment apparatus, comprising:

a wastewater treatment bath for treating wastewater (1);

an oxidizing reagent adding unit for adding an oxidizing reagent in the wastewater treatment bath **(at least 13)**;

an ultraviolet treatment unit for irradiating an ultraviolet ray **(2)**; and

an acid treatment bath having an acid adding unit for adding acid **(See 18, which has 19, an acid supplying unit, provided)**, provided on a downstream side of the wastewater treatment bath **(See in the Figure, 18 is operatively downstream of the treatment bath 1)**. Furthermore, it is unclear how the pH of the wastewater in the bath defines the invention in terms of its structure, as the pH of the wastewater in the bath a limitation drawn to the material operated on by the apparatus, and it therefore represents applicant's intended use of the apparatus. See MPEP 2114 and 2115. Nonetheless, Massholder contemplates that the wastewater has a pH of 4, and that the pH may vary over wide ranges **(See Massholder col. 5 lines 1-2 and lines 25-26)**. Furthermore, Massholder provides an acid supply line to the wastewater treatment bath **(See 63)**, so Massholder is capable of providing further acid to the wastewater, thereby lowering its pH, regardless of its initial pH.

6. As to claim 24, Massholder teaches the apparatus of claim 19, and pH of the wastewater in the wastewater are limitations drawn to the material operated on by the apparatus, which relate to applicant's intended use of the apparatus, and do not serve to define the invention in terms of its structure. See MPEP 2114 and 2115.

Nonetheless, Massholder contemplates that the wastewater within the treatment tank is brought to a pH of 10 **(See Massholder col. 4 lines 1-5)**.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 22-23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Massholder.

11. As to claims 22 and 23, the ratios of oxidizing agent to COD in the wastewater are limitations drawn to the material operated on by the apparatus, which relate to applicant's intended use of the apparatus, and do not serve to define the invention in terms of its structure. See MPEP 2114 and 2115. Therefore, it is the position of the examiner that Massholder is an anticipatory reference to claims 22 and 23 because it provides the capability to control the peroxide concentration of the wastewater provided to the UV treatment unit (**See 13**). Nonetheless, Massholder does not specifically contemplate the oxidizing agent/COD ratios specified in claims 22 and 23. However, Massholder provides that the amount of peroxide to add is a result effective variable, which must meet the oxidative needs of treating the total metal content and the need to decompose cyanides (**See Massholder see at least col. 4 lines 5-15 and lines 45-50, See also examples 1-5 at col. 7 line 35 -- col. 8 line 50**). *Discovery of an optimum value of a result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*. And therefore, claims 22 and 23 are also alternatively obvious in view of Massholder.

#### ***Response to Arguments***

12. Applicant's arguments with respect to claims 19, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Stelling whose telephone number is (571)270-3725. The examiner can normally be reached on Monday through Thursday 12:00PM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

las 12-24-09

/Matthew O Savage/  
Primary Examiner, Art Unit 1797